



YEAR 2004 CONSUMER CONFIDENCE REPORT

Where Does Fort Irwin's Water Come From?

Fort Irwin routinely monitors for constituents in the drinking water according to Federal and State laws. The tables show the results of the monitoring for the period of January 1st through December 31st 2004. It is important to Fort Irwin that the customers be informed.

Questions concerning this report or concerning the water system:

Contact: Christopher Woodruff, Lead Water Quality for Fort Irwin
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MUY IMPORTANTE

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo `o hable con alguien que lo entienda bien.

It is Fort Irwin's responsibility to provide water system customers with this year's Consumer Confidence Report (CCR). It is important to keep customers informed about the water quality and services delivered over the past year. Fort Irwin's goal continues to be to provide a safe and dependable supply of drinking water. A percentage of the water pumped is run through a Reverse Osmosis Treatment Plant to meet drinking water standards.

The type of water found at the NTC is groundwater, meaning it comes from underground aquifers from one of or a combination of three sources: 1) Bicycle Lake Basin, located approximately 2 miles northeast of the cantonment area adjacent to Barstow Road; 2) Langford Lake Basin, located approximately 2 miles southeast of the cantonment area adjacent to Langford Lake Road; and 3) Irwin Basin, located within the cantonment area itself

Last year, we conducted more than 3,000 tests on over 150 contaminants.



Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about the contaminants and potential health effects can be obtained by calling the EPA's safe drinking water hotline at 1-800-426-4791 or at their web site www.epa.gov/safewater/

This table provides many terms and abbreviations customers may not be familiar with. To understand these terms, Fort Irwin has provided the following definitions:

Non-Detects (ND) – Laboratory analysis indicates that the constituent is not present or not tested.

MG – Million Gallons

Parts per million (ppm) or Milligrams per liter (mg/L) – One part per million corresponds to one minute in two years, or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Pico curies per liter (pCi/L) – Pico curies per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) – Measure of radiation absorbed by the body.

Nephelometric Turbidity Unit (NTU) – Nephelometric turbidity units are a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Regulatory Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's are set by the U.S. Environmental Protection Agency.

Public Health Goal (PHG) – The level of a contaminant in drinking water below which there is known or expected risk to health. PHG's are set by the California Environmental Protection Agency.

Primary Drinking Water Standard (PDWS) – MCL's for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Safe Drinking Water Act (SDWA) – Federal law which sets forth drinking water regulations.

Source of drinking water (both tap water and bottled water), include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic Chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the California Department of Health Services (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

FORT IRWIN SERVICE AREA INFORMATION

Fort Irwin's water system provides water to approximately 18,000 customers daily.

The water system consists of 11 wells that pump the domestic water into our system. There are 5 storage tanks that hold approximately 4,750,000 gallons of water for our domestic system. The water that we drink is processed through a Reverse Osmosis Water Treatment Plant. This process removes the excess contaminants and ensures our water meets all State and Federal Safe Drinking Water standards. There are 3 potable water storage tanks that store approximately 433,000 gallons of drinking water. There are 28 miles of potable water transmission lines and 82 miles of domestic water transmission lines.

A source water assessment was completed in 1997 in the form of a document entitled "Ground Water Hydrology and Water Quality of Irwin Basin At Fort Irwin and The National Training Center, California" Water Resources from: US Geological Survey Information Services, Box 25286, Federal Center, Denver, CO 80255. Source water assessments for Langford Lake and Bicycle Lake Basins are not available. A copy of the Irwin Basin Assessment can be viewed at the County of San Bernardino District Office, 464 West 4th Street, Suite 437, San Bernardino, CA 92401. You may request a summary of the assessment be sent to you by contacting the DHS District Engineer at (909) 383-4328.

SYSTEM IMPROVEMENTS

Fort Irwin is in the initial steps and design of a new Water Treatment Facility. Our goal is that by the end of the year 2008, all water that our customer's use will be of a quality to consume.

SHOULD CUSTOMERS BE CONCERNED?

MCL's are set at very stringent levels. To understand the risk of possible health effects described for regulated contaminants, customers should know that a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effects.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline.

WATER CONSERVATION

Our Water at Fort Irwin

Conserving water at Fort Irwin is as important to the installation as breathing the air. Fort Irwin is supported by our own water wells. Results from environmental engineering reports shows 80 years of available water. It is only replenished by the small amount of rain we receive annually. So we pump out much more than we receive.

Conserving water is very important for several reasons, the primary being the cost to have a water line brought in from another water provider would be very expensive and then we would have to buy our water rather than only paying the cost to pump it from the ground.

Fort Irwin is very reliant on you the consumers to conserve this natural resource. Following are some tips on how to conserve water and help extend the life of our independence here at Fort Irwin.

Water Conservation Tips

Wash only full loads of laundry in your washing machine or full loads of dishes in your dishwasher. You'll not only save our water, but conserve energy as well.

Turn the water off. Minimize faucet use when shaving, brushing teeth and washing dishes. If you faucets or showerheads are leaking call the housing office and report it.

Shorten your shower time by one minute. Cut back on your shower time and you will save big time on water use. Or limit you showers to 5 minutes, this not only saves water but energy as well.

Don't pre-rinse your dishes. Check to see if you dishwasher can clean dishes without pre-rinsing them. Most newer dishwashers don't require pre-rinsing.

Reuse clean household water. Collect all the water that is wasted while waiting for the hot water to reach your faucet or showerhead. Use this to water your houseplants or outdoor planters. Do the same with water that is used to boil eggs and steam vegetables.

Use a car wash that recycles water. Or if you wash your car at home be sure to use a nozzle devise that stops the water flow while not in use.

Reduce lawn watering. Water your lawns in the evenings or early morning. Watering you lawn during the mid-day is not only harmful to your lawn, but most of the water evaporates before it can benefit you lawn. Water deep two or three times a week instead of everyday.

The following tables present the results of our monitoring for the reporting period of 2004. In reading the tables, compare the MCL column to the Average Level Detected column. As you can see, the only contaminant, which exceeds the maximum level, is the Fluoride in the Domestic Water system. Once Reverse Osmosis treats the water, all contaminants are within acceptable ranges.

PRIMARY STANDARDS DRINKING WATER (RO)
Mandatory Health Related Standards Established by the State of
California, Department of Health Services or USEPA

TEST RESULTS								
Data is obtained from most recent sampling and may be from previous years								
Contaminant	Violation Y/N	Average Level Detected	Range	Unit Measurement	MCL	PHG	MCLG	Likely Source of Contamination
Radioactive Contaminants								
Alpha Activity, Gross	N	ND	ND	pCi/L	50	N/A	N/A	Erosion of natural deposits
Inorganic Contaminants Lead and Copper Results are from year 2004 90 th percentile for Lead and Copper ND Lead; 0.079 mg/L Copper 67 sites were sampled 1 site exceeded the action level for Copper. No Lead or Copper was detected at the sources.								
Arsenic	N	ND	ND	ppb	50	N/A	N/A	Erosion of natural deposits
Copper	N	0.035	ND- 0.14	mg/L	AL 1.3	0.17	AL= 1.3	Internal corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	0.91	ND-2	mg/L	2	1	N/A	Naturally occurring from erosion of natural deposits
Nitrate	N	5.2	5.2	mg/L	45	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks; Sewage; erosion of natural deposits
Volatile Organic Contaminants								
TTHMS	N	0.004	ND	mg/L	100	N/A	N/A	By-product of drinking water contamination

SECONDARY STANDARDS DRINKING WATER (RO)
Established by the State of California, Department of Health Services

Contaminant	Violation N/Y	Average Level Detected	Range	Unit Measurement	MCL	Likely Source of Contamination
Color	N	ND	ND	Units	15	Naturally occurring organic materials
Corrosivity (Aggressive index)	N	10.50	9.4 - 12.0	Units	Non- corrosive	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water, affected by temperature and other factors
Odor-Threshold	N	1	0 -1	Units	3	Naturally occurring organic materials
Turbidity	N			Units	5	Soil runoff
Total Dissolved Solids	N	185	20 - 460	mg/L	1000	Runoff/leaching from natural deposits
Specific Conductance	N	215	200 - 230	Micromhos	1,600	Substances that form ions when in water; seawater influence
Chloride	N	43	26 - 61	mg/L	500	Runoff/leaching from natural deposits; seawater influence
Sulfate	N	41	21 – 62	mg/L	500	Runoff/leaching from natural deposits; seawater influence

**GENERAL PHYSICAL AND UNREGULATED
CHEMICALS THAT WERE DETECTED
FORT IRWIN POTABLE WATER (RO)**

CONSTITUENT	AVERAGE	RANGE	CONSTITUENT	AVERAGE	RANGE
Hardness	23.6	9-91	Sodium	45	30 – 60
Calcium	8.13	2.9-23	Potassium	6.5	2 – 11
Magnesium	0.89	ND-5.2	Alkalinity	49.15	16-370
Ph	7.8	7.5-7.9	Chromium 6	0.75	ND – 1.5

DOMESTIC WATER SUPPLY (non-drinking)
Mandatory Health Related Standards Established by the State
of California, Department of Health Services or USEPA

TEST RESULTS								
Data is obtained from most recent sampling and may be from previous years								
Contaminant	Violation N/Y	Average Level Detected	Range	Unit Measurement	MCL	PHG	MCLG	Likely Source of Contamination
Radioactive Contaminants								
Alpha Activity, Gross*	N	8.3	5.2 – 13.0	pCi/L	50	N/A	N/A	Erosion of natural deposits
Uranium*	N	8.6	2.0 – 13.8	pCi/L	20	0.5	0.5	Erosion of natural deposits
Inorganic Contaminants								
Lead and Copper Results are from year 2004 90 th percentile for Lead and Copper ND Lead; 0.071 mg/L Copper 71 sites were sampled 1 site exceeded the action level for Copper. No Lead or Copper was detected at the source.								
Arsenic**	N	14.5	ND - 35	ppb	50	N/A	N/A	Erosion of natural deposits
Copper	N	0.037	ND – 0.17	mg/L	AL 1.3	0.17	AL= 1.3	Internal corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	3.40	0.34 – 7.35	mg/L	2	1	N/A	Naturally occurring from erosion of natural deposits
Nitrate	N	6.23	4.5 – 9.4	mg/L	45	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks. Sewage; erosion of natural deposits
Volatile Organic Contaminants								
TTHMS	N	2.4	0.55 – 6.7	mg/L	100	N/A	N/A	By-product of drinking water chlorination

*Test results from the year 2003 source water

**Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage and problems with their circulatory system, and may have an increased risk of getting cancer. Some of the wells at Fort Irwin contain low levels of arsenic; therefore treatment options are currently under review to meet the EPA's 2006 MCL of 10 ppb. The State has not yet set a new MCL for arsenic.

SECONDARY STANDARDS DOMESTIC WATER
Established by the State of California, Department of Health Services

Contaminant	Violation N/Y	Average Level Detected	Range	Unit Measurement	MCL	Likely Source of Contamination
Color	N	ND	ND	Units	15	Naturally occurring organic materials
Corrosivity (Aggressive index)	N	12	11 – 13	Units	Non- corrosive	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; affected by temperature and other factors
Odor-Threshold	N	1	1	Units	3	Naturally occurring organic materials
Turbidity	N	10	0.5 - 99	Units	5	Soil runoff
Total Dissolved Solids	N	633	520 – 880	mg/L	1000	Runoff/leaching from natural deposits
Specific Conductance	N	965	930 – 1000	Micromhos	1,600	Substances that form ions when in water; seawater influence
Chloride	N	195.5	91 - 300	mg/L	500	Runoff/leaching from natural deposits; seawater influence
Sulfate	N	135	120 - 150	mg/L	500	Runoff/leaching from natural deposits; seawater influence

**GENERAL PHYSICAL AND UNREGULATED
CHEMICALS THAT WERE DETECTED
FORT IRWIN'S WELLS**

CONSTITUENT	AVERAGE	RANGE	CONSTITUENT	AVERAGE	RANGE
Hardness	88	88	Sodium	170	150 – 190
Calcium	30.33	ND – 72	Potassium	12	10 - 14
Magnesium	7.6	4.2 - 11	Alkalinity	153.66	140 – 162
pH	7.6	7.5 – 7.9	Chromium 6	0.005	ND – 0.012
Boron	950.58	120 – 1700	Vanadium	32.17	6 - 140